

Date: Wednesday, 29/04/2009 3:07:13 PM
 User: Julie Dawson

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	SHORT STEP ASSEMBLY	
Job Number :	47624			
Estimate Number :	11999			
P.O. Number :		Part Number :	D350591122	
This Issue :	29/04/2009	S.O. No. :		
Prsht Rev. :	NC	Drawing Number :	D2351	
First Issue :	/ /	Project Number :	N/A	
Previous Run :	46996	Drawing Revision :	E	
		Material :		
Written By :		Due Date :	10/05/2009	Qty: 4 Um: Each
Checked & Approved By :	<u>JUD 09-04-29</u>			
Comment :	Est Rev:E 02.10.21 Re-format; Incorporated D2351-041 IPP K J/RF			

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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HJ for JUD 09/05/25



Comment: DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D350-591-122 CHG004

S or lot 25

2.0	D2244116	Step Extrusion
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Comment: Qty: 0.5000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

0.5 D2244-116 Extrusion *B33733*

SAD 09-05-06

3.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
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Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2244-116 extrusion to 55.32" long as per Dwg D2351 using cutting table setup DT8185-G

2-Drill extrusion per Dwg D2351 using Jig DT8230 for rivets.

SAD 09-06-06

4.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

N/A R

5.0	BENDING	BENDING MACHINE - SKIDTUBES
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Comment: BENDING MACHINE

Bend as per dwg

DP

9-5-6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Drawing Name: SHORT STEP ASSEMBLY

Job Number: 47624

Part Number: D350591122

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09/05/07 (74)

7.0

D28502

End Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2850-2 End Bracket B31409

09.05.11 4

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Bevel Fwd and Aft end for welding

2-Weld Aft End Bracket per QSI 004 & Dwg D2351 using Welding Jig DT8033

A/R Aluminum Rod m110912

3-Do not Grind Flush

09.05.11 4
09.05.11 4

9.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

09.05.12 (4)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09/05/12 (4) RH

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

SAD 09-05-12 (4)

12.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09/05/12 (4) X

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Drawing Name: SHORT STEP ASSEMBLY

Job Number: 47624

Part Number: D350591122

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

D2582

Step Leg Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2582

Step Leg Assy 44293 (1)

47644 (3)

SAD

09-05-12

(4)

14.0

MS20600AD4W3

Cherry Rivets



Comment: Qty.: 16.0000 Each(s)/Unit Total : 64.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

16 MS20600AD4W3 Rivet

11126375

SAD

09-05-12

(4)

15.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Rivet Leg Assembly as per Dwg D2351

SAD

09-05-12

(4)

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SAD 09/05/12 (+4 RH)

17.0

D267334

End Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2673-34 End Plate

335887

SAD 09-05-14 4

18.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld Fwd End Plate per QSI 004 & Dwg D2351

A/R Aluminum Rod 1110130

2-Grind end plate flush.

SAD 09-05-14 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 47624

Part Number: D350591122

Job Number:



Seq. #: Machine Or Operation: Description :

19.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

PD 09/05/14

20.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

509/5/20 24 RVC

21.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Touch up Alodine

UMD 09/05/21 (14)

22.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M111472 Pressure WASH

MD 09/05/21

START TIME:

13:00

OVEN TEMPERATURE:

300°

FINISH TIME:

13:30

UMD 09/05/21

(14)

23.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk per Dwg D2351 and QSI 005 4.4

Batch: M111013

MD 09/05/22

(14)

24.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

PK 09-05-22 (4)

25.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

26.0

D22301

Lug



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Packing Kit Qty Part Number Description Batch

46427

09/05/25 (14)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Drawing Name: SHORT STEP ASSEMBLY

Job Number: 47624

Part Number: D350591122

Job Number:



Seq. #:

Machine Or Operation:

Description :

1 D2230-1 Mounting Lug

27.0

D22303

Lug



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

1 D2230-3 Mounting Lug B47110 Reuf

SS 09/05/25 (x4)

28.0

D2856400

Abrasion Strip



Comment: Qty.: 0.6000 f(s)/Unit Total : 2.4000 f(s)

Pick:

Packing KitQty Part Number Description Batch

1 D2856-400 7.20" Abrasion Strip B42437

SS 09/05/25 (x4)

29.0

AN337A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

2 AN3-37A Bolt M105425

SS 09/05/25 (x4)

30.0

AN413A

Bolt



Comment: Qty.: 3.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

3 AN4-13a Bolt M111477

SS 09/05/25 (x4)

31.0

AN960JD10

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 16.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

4 AN960JD10 Washer M111279

SS 09/05/25 (x4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Drawing Name: SHORT STEP ASSEMBLY

Job Number: 47624

Part Number: D350591122

Job Number:



Seq. #:

Machine Or Operation:

Description :

32.0

AN960JD416

Washer



Comment: Qty.: 6.0000 Each(s)/Unit Total : 24.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch
6 AN960JD416 Washer M111279

SS 09105/25 (x4)

33.0

MS21042L3

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch
2 MS21042L3 Nut (or -3) M110844

SS 09105/25 (x4)

34.0

MS21042L4

Nut



Comment: Qty.: 3.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch
3 MS21042L4 Nut (or -4) M110450

SS 09105/25 (x4)

35.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

SS 09105/25 (x6RH)

36.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-591-122

Location: 80

PPP Rev: 2

9/5/25

SP

37.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09105/26

Job Completion



MF 09-05-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

DART

DESIGN KE	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D2351	REV. E SHEET 1 OF 2
DATE 05.11.14		TITLE HIGH FLOAT STEP ASSEMBLY	SCALE NTS
A	95.02.15	NEW ISSUE	
B	97.05.22	END CAPS CHANGED	
C	97.07.23	ADDED BUSHING AND FACING INFO	
D	98.12.17	CHANGED TO BEND, D2850 REPLACES D2357 & D2358, INCORP. DEO 9084	
E	05.11.14	UPDATE FINISHING NOTE	

D2351 HIGH FLOAT STEP ASSEMBLY PARTS LIST

Part No.	Description	QTY -041	QTY -042
D2351-041	High Float Step Assembly (LH)	X	
D2351-042	High Float Step Assembly (RH)		X
D2244-55.4	STEP EXTRUSION*	1	1
D2582	STEP LEG ASSEMBLY	1	1
D2673-34	STEP END PLATE	1	1
D2850-1	END BRACKET	1	
D2850-2	END BRACKET		1
MS20600AD4W3	RIVETS	16	16

*cut per drawing

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WORK ORDER

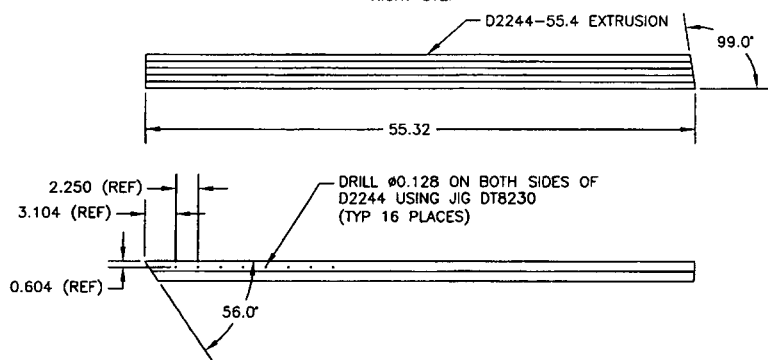
NO. 11924
RELEASED
05.11.28

PH
ECN 1105
UNDER REVIEW
07.11.29
P42 NCR # 263

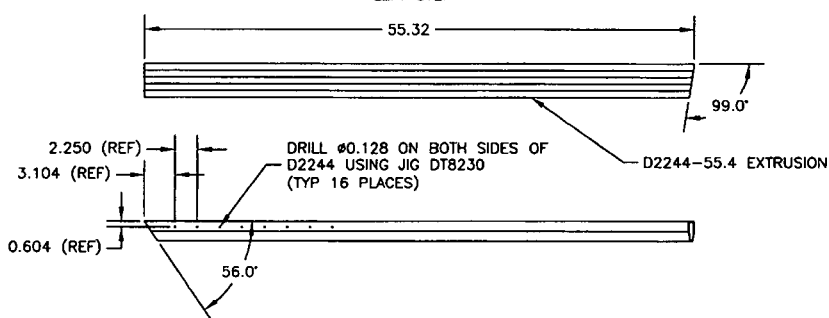
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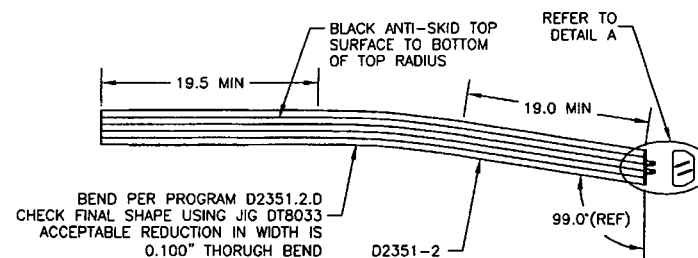
D2351-2 CUTTING/DRILLING DETAIL
RIGHT STEP



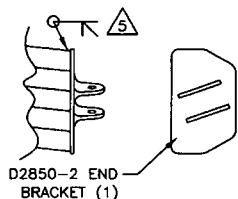
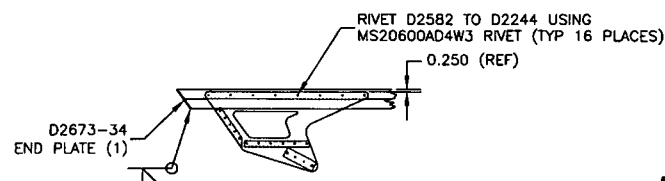
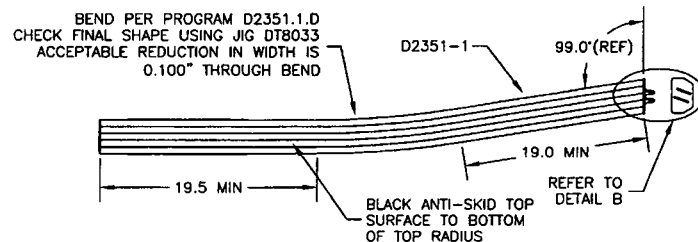
D2351-1 CUTTING/DRILLING DETAIL
LEFT STEP



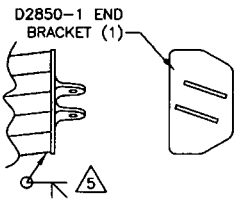
D2351-042 BENDING/ASSEMBLY DETAIL
RIGHT STEP



D2351-041 BENDING/ASSEMBLY DETAIL
LEFT STEP



DETAIL A
SCALE: 1:4



DETAIL B
SCALE: 1:4

D2582 STEP LEG ASSEMBLY (1)



GENERAL NOTES

- 1) WELD PER DART QSI 004
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

CHAMFER D2244 EXTRUSION 0.075"x45" BEFORE WELDING D2850-1 OR D2850-2 IN PLACE. DO NOT GRIND FLUSH.

RELEASED
05.11.14

UNDER REVIEW

ECU 105

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DESIGN	DRAWN BY	DART	DART AEROSPACE LTD. HAMPSHIRE, ONTARIO, CANADA
KE	PH		
CHECKED	APPROVED	DRAWING NO.	REV. E
#	#	D2351	SHEET 2 OF 2
DATE		TITLE	SCALE
05.11.14		HIGH FLOAT STEP ASSEMBLY	1:12

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WORK ORDER
007624